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DATA
SUMMARY
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This is a special report on progress in achieving the national Healthy People 2000 objectives.

Highlights

- California has achieved seven national objectives for reductions in:

Infant mortality
Heart disease deaths
Lung cancer deaths
Breast cancer deaths
Motor vehicle deaths
Suicide
Syphilis

- Significant reductions have been achieved for:

All causes of death
Stroke deaths
Homicide
Tuberculosis cases
Measles cases
Teen birth rate
Late prenatal care

- Objectives were not achieved for nine of the Health Status Indicators

California's Progress in Achieving Healthy People 2000 Health Status Indicators

By Jim Sutocky

Background

The Health Status Indicators (HSIs) were developed and published in 1991 under the auspices of the U.S. Centers for Disease Control and Prevention by a group of public health professionals and experts known as "Committee 22.1", reflective of the Healthy People 2000 (HP2000) objective 22.1 which called for the development of a set of HSIs appropriate for use by Federal, State, and local health agencies.¹⁻³ The consensus set of 18 HSI's are intended to provide a mechanism for monitoring health status of populations over time in areas that are broadly representative of the HP2000 Priority Areas, and have been used by the California Department of Health Services (DHS) to monitor the state's progress in achieving HP2000 objectives since 1993, when the first *County Health Status Profiles* report was issued.⁴⁻⁶

This report updates previously published data on California's success in achieving HP2000 objectives, and provides a useful extension to the statewide data published in the *Midcourse Review*.⁷

Methods

Mortality data for HSIs 1-9 and 13 (see Table 1) were derived from the *County Health Status Profiles* reports published annually by the Center for Health Statistics.^{4,5} Three-year average mortality rates for 1993-1995 through 1996-1998 were computed according to procedures detailed in the *Profiles* Technical Notes section. Average rates for 1997-1999 HSIs 2-6 and 8-9 were calculated independently, since the 1999 Death Statistical Master File was coded using ICD-10 and the previous years used ICD-9.⁸ Work-related injury deaths and their associated rates were calculated using data from the California Department of Industrial Relations and the Employment Development Department^{9,10}. Trends were tested for statistical significance using regression analysis procedures in the PHRATE® program.¹¹

Morbidity data for HSIs 10-12 and natality and poverty data for HSIs 13-17 were also derived from the *Profiles* reports cited previously. Air quality data for HSI 18 were obtained from the National Center for Health Statistics (NCHS), State and Local Support Branch.¹² Trends for HSIs 10-18 were also tested for significance using regression analysis procedures in the PHRATE® program.¹¹

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Results

Table 1 presents trends in three-year averages for each of the 18 HSIs from 1993-1995 through 1997-1999, except for HSI 18, which uses single year data. Overall, targets for seven of the 18 HSIs have been achieved, there has been significant movement toward targets for five HSIs, and no significant trends observed for two HSIs. Two additional HSIs (Total Deaths and Children in Poverty) have no associated HP2000 objectives, and two others showed no significant trends and had not achieved the HP2000 target.

Table 1.
Healthy People 2000 Health Status Indicators
California, 1993 – 1999

Health Status Indicator	93-95 AVG	94-96 AVG	95-97 AVG	96-98 AVG	97-99 AVG	HP2000 Target	Trend	Achieved?
1. Total Death Rate	453.9	454.2	439.9	425.7	415.0	N/A	Sig. -	N/A
2. Heart Disease Death Rate	101.3	100.6	96.9	93.9	91.9	130.0	Sig. -	Yes ✓
3. Stroke Death Rate	25.7	26.3	26.1	25.3	23.7	20.0	Sig. -	No
4. Cancer Death Rate	32.2	31.8	31.0	30.0	29.3	42.0	Sig. -	Yes ✓
5. Breast Cancer Death Rate	19.7	19.7	18.9	18.3	17.3	20.6	Sig. -	Yes ✓
6. Motor Vehicle Death Rate	13.2	13.2	12.4	11.4	10.3	14.2	Sig. -	Yes ✓
7. Work-Related Death Rate	4.1	4.2	4.5	4.3	4.1	4.0	n.s.	No
8. Suicide Rate	10.9	10.7	10.3	9.4	8.9	10.5	Sig. -	Yes ✓
9. Homicide Rate	12.7	11.8	10.6	9.0	7.8	7.2	Sig. -	No
10. Tuberculosis Rate	15.1	14.4	13.4	12.4	11.5	3.5	Sig. -	No
11. Syphilis Incidence Rate	2.5	2.0	1.5	1.2	1.0	4.0	Sig. -	Yes ✓
12. Measles Cases	89	72	62	26	17	0	Sig. -	No
13. Infant Death Rate	7.2	7.0	6.8	6.4	6.1	7.0	Sig. -	Yes ✓
14. Low Birth Weight Percent	6.1	6.1	6.1	6.1	6.2	5.0	n.s.	No
15. Early Prenatal Care Pct.	77.9	79.1	80.5	81.6	82.6	90.0	Sig. +	No
16. Teen Birth Rate	67.6	66.6	61.7	57.2	53.6	23.3	Sig. -	No
17. Children in Poverty Pct.	18.2	18.2	18.2	18.2	18.2	N/A	n.s.	N/A
18. Air Quality Percent	<u>1994</u> 80.9	<u>1995</u> 89.0	<u>1996</u> 87.2	<u>1997</u> 68.7	<u>1998</u> 89.3	25.0	Sig. +	No

NOTES: Sig. - indicates statistically significant decline, or movement toward target;
 Sig. + indicates statistically significant increase, or movement away from target, except for HSI 15 (Early Prenatal Care);
 n.s. indicates non-significant trend;
 N/A indicates data Not Available or No Applicable HP2000 objective;
 Mortality data use ICD-9 codes and the 1940 US population standard for age-adjusting;
 1999 mortality data were coded using ICD-10;
 All rates and percentages are based on 3-year moving averages, except for Air Quality.

SOURCES: See references 3,4,5,9,10,11,12.

Mortality HSIs

- 1. All Causes of Death.** Rates significantly declined from 453.9 deaths per 100,000 population during the 1993-1995 period to 415.0 per 100,000 during the 1997-1999 period. No HP2000 objective is associated with this indicator.
- 2. Heart Disease.** Death rates significantly declined from 101.3 per 100,000 for 1993-1995 to 91.9 per 100,000 for 1997-1999. The HP2000 target rate of 130.0 deaths per 100,000 population has been achieved.
- 3. Stroke.** Significant decline in death rates from 26.1 per 100,000 in 1995-1997 to 23.7 per 100,000 in 1997-1999. However, the HP2000 objective of 20.0 deaths per 100,000 population has not been achieved.
- 4. Lung Cancer.** Significant decline in death rates from 32.2 per 100,000 to 29.3 per 100,000. The HP2000 target rate of 42.0 per 100,000 has been achieved.
- 5. Female Breast Cancer.** Significant decline in death rates from 19.7 per 100,000 females to 17.3 per 100,000. The HP2000 target rate of 20.6 deaths per 100,000 females has been achieved.
- 6. Motor Vehicle Crash.** Significant decline in death rates from 13.2 per 100,000 to 10.3 per 100,000. The HP2000 target of 14.2 deaths per 100,000 population has been achieved.
- 7. Work-Related Injury.** No significant trend observed between 1993-1995 through 1997-1999. The HP2000 target of 4.0 deaths per 100,000 population has not been achieved, although rates have been very close to the target.
- 8. Suicide.** Significant decline from 10.9 deaths per 100,000 population to 8.9 per 100,000. The HP2000 target rate of 10.5 deaths per 100,000 population has been achieved.
- 9. Homicide.** Significant decline in death rates from 12.7 per 100,000 to 7.8 per 100,000 for 1997-1999. The HP2000 objective of 7.2 homicides per 100,000 population has not been achieved, although the 1997-1999 rate was very close to the target.

Morbidity HSIs

- 10. Tuberculosis.** Incidence rates per 100,000 population declined significantly from 15.1 in 1993-1995 to 11.5 in 1997-1999. However, the HP2000 target rate of 3.5 per 100,000 has not been achieved.
- 11. Syphilis.** Incidence rates significantly declined from 2.5 per 100,000 to 1.0 per 100,000. The HP2000 objective of 4.0 per 100,000 has been achieved.
- 12. Measles.** There was a significant decline in the number of measles cases between 1993-1995 and 1997-1999, from 89 to 17. However, the HP2000 target of zero cases has not been achieved.

Natality HSIs

13. Infant Deaths. Infant mortality rates significantly declined from 7.2 per 1,000 live births in 1993-1995 to 6.1 per 1,000 live births in 1997-1999. The HP2000 target of 7.0 infant deaths per 1,000 live births has been achieved.

14. Low Birthweight. There was no significant change in the percentage of low birthweight live births from 6.1 in 1993-1995 to 6.2 in 1997-1999. The HP2000 target of 5.0 percent has not been achieved.

15. Early prenatal care. The percentage of women who received early (i.e., first trimester) prenatal care significantly increased from 77.9 in 1993-1995 to 82.6 in 1997-1999. However, the HP2000 target of 90 percent has not been achieved.

16. Teen Births. Birth rates among females aged 15-19 declined significantly from 67.6 per 1,000 in 1993-1995 to 53.6 per 1,000 in 1997-1999. However, the HP2000 target of 23.3 births per 1,000 females aged 15-19 was not achieved.

17. Childhood Poverty. Data for this indicator has not changed since the 1990 Census data were published (no intercensal estimates produced), and will not be available again until the 2000 Census data are available. During the decade of the 1990's, approximately 18.2 percent of California's children under 18 years of age were below established poverty levels. There is no HP2000 objective associated with this HSI.

Environmental HSI

18. Air Quality. Significant increases in the percent of persons residing in California counties that exceeded Environmental Protection Agency (EPA) standards for air quality were observed, from 80.9 percent in 1994 to 89.3 percent in 1998. The HP2000 target of 25 percent has not been achieved.

Conclusion

The comparative success that California has realized in the number of HP2000 targets attained and the number of HSIs with significantly improving trends is evident from these data and from other state-level data published by the NCHS and by California.^{3,6,13} As the Director of the NCHS, Dr. Edward Sondik, observed in his assessment of the HP2000 HSIs: "California is an excellent example of how a state can utilize information from a wide variety of sources to produce a useful and informative profile of the health of its citizens" (p.518).¹⁴

California's experience has shown that monitoring a consensus set of health status indicators and measuring progress toward achieving associated HP2000 objectives provides valuable information and insights to health program management and policy-makers at the State and local levels. Transitioning to the newly established set of Healthy People 2010 Leading Health Indicators (LHIs) will provide another mechanism for continuing this endeavor during the first decade of the new millennium.¹⁵